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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/674,994	12/13/2000	Mark Alperovich	109289.00164	9118

27557 7590 05/20/2005

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EXAMINER

ANGEBRANDT, MARTIN J

ART UNIT	PAPER NUMBER
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1756

DATE MAILED: 05/20/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/674,994

Applicant(s)

ALPEROVICH ET AL.

Examiner

Martin J. Angebrannndt

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1756

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 February 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,2,4-10 and 12-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2,4-10 and 12-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

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1. The response provided by the applicant has been read and given careful consideration.

Response to the arguments offered by the applicant are addressed after the first rejection to which they are directed.

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 1,2,4-10 and 12-20 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 1, "triphenylmethylazibenzene" should read - - triphenylmethylazobenzene- -.

In claim 2, "indigoide colors" should read - - indigoid **colorants**- - .

In claim 2, "porphyries" should read - - porphyrins- - .

In claims 1 and 8-10, These claims should indicate that the free radicals generated decolorize the dyes (see specification at page 7).

Claim 4 should recite vinyl resins to support the recitation of claim 15.

3. Claims 17 and 18 are objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form.

This limitation of the fluorescent dye to 0.1-10 wt% is already recited in the independent claims.

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1,4,12 and 14-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Katoh et al. EP 812698.

Katoh et al. EP 812698 teaches in example 1, a microcapsule solution where 2.14 wt% of Dye A-1 (dried layer) is mixed with 2.14 wt% benzoin isobutyl (ether) and incorporated into a PVA solution. (12/30-49). The free radical generating agent is disclosed as discoloring the dyes. (3/57-58). The free radical generating agents include azobisisobutyronitrile (AIBN) (8/49-50). Examples 2,3 are similar, but use different members of the disclosed free radical generating agents.

It would have been obvious to one skilled in the art to modify the cited examples by replacing the free radical generating agents specifically used in these examples with one of the 15 others specifically exemplified, such as azobisisobutyronitrile, with a reasonable expectation of forming a useful decolorizing DIP composition.

6. Claims 1,2 and 12-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP 54-061541.

Each of the three examples on page 3 includes an organic solvent, a polyvinylbutyral binder, ~7.5 wt% of oxidizing agent chloramine T and 1.5 wt% of a merocyanine dye coated to a thickness of 50 microns. Other useful oxidizing agents include t-butylhydroperoxide, cumyl peroxide and benzoyl peroxide.

It would have been obvious to one skilled in the art to modify the cited examples by replacing the oxidizing agent specifically used in these examples with one of the 12 others

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specifically exemplified in the lower right paragraph on page 2, such as t-butylhydroperoxide, cumyl peroxide or benzoyl peroxide, with a reasonable expectation of forming a useful decolorizing DIP composition.

7. Claims 1,2,8,9 and 12-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP 54-061541 and Sasaoka JP-59-092448.

Sasaoka JP-59-092448 teaches the dye of the examples Naphthol Green B with a gelatin binder as the lower layer being decolorized bleached by the action of the benzoyl peroxide in the upper layer containing an acrylic resin as a binder when these layers are heated and mix.

(abstract)

It would have been obvious to one skilled in the art to modify the invention of JP 54-061541 by placing the oxidizing agent in an adjacent layer as taught by Sasaoka JP-59-092448 with a reasonable expectation of the resultant bilayer being able to record information by decolorization based upon the teachings of Sasaoka JP-59-092448 which is old and well known in the art and with a reasonable expectation of the resulting medium being more storage stable due to the oxidizing agent and dye being in separate layers as opposed to adjacent to each other in the same layer.

8. Claims 1,2,4,10 and 12-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP 54-061541, in view of Glushko et al. '671 and Russell '031

Glushko et al. '671 teach multilayered optical recording media where fluorescent layers are interspaced with transparent spacer layers. (see figures 9 and 12). Useful fluorescent dyes are disclosed including rhodamine dyes. (11/54-65). The addition of materials including those generating free radicals which bleach the dyes are disclosed. (12/25-35). Example 1 uses a 0.5

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microns film or of 2,3,-dimethyl-1,3-diphenyl-5,12-naphthacenequinone in PMMA and pyrrolidone. (18/25-29). The use of mixtures of the dissolved dye and an optical laquer is disclosed as forming film thicknesses of 20-30 microns (18/52-64).

Russell '031 teaches the use of UV, visible and IR light with the recording media described. (3/34-38) Figures 4-7 exemplify the case where recording layers are different colored materials, such as photographic film, photoluminescent materials or inks. (5/38-52, 6/45-52, 6/62-7/2 and 7/24-39). The disc shape of the recording media are shown in figures 2 and 3a. These are separated by spacer layers/support materials.

It would have been obvious to use multiple layers of fluorescent recording materials, such as those taught by JP 54-061541 along with optical filtration on the detection to separate the data from the various layers as taught by Glushko et al. '671 and Russell '031 to enable more data to be stored in a single optical disc structure. . Further it would have been obvious to use substrate materials to separate them to prevent mixing during coating.

9. Claims 1,2,4-6,10 and 12-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP 54-061541 and Vogel et al. '522.

Vogel et al. '522 teaches a solution in column 24, where 2 wt% of a dye is combined with PMMA, 18 wt% ditolyliodonium hexafluorophosphate and 9 wt% 2-ethyl-9,10-dimethoxyanthracene. The use of various free radical generating compounds is disclosed. (6/44-7/45). Useful dyes are disclosed throughout.

It would have been obvious to use other binders, such as those disclosed by Vogel et al. '522, in place of the PVB used in the examples of JP 54-061541 with a reasonable expectation

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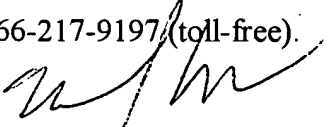
of success in forming a decolorizing layer without the change in binder preventing the decolorization based upon the showing by Vogel et al. '522.

10. Claim 7, 19 and 20 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Martin J Angebranndt whose telephone number is 571-272-1378. The examiner can normally be reached on Monday-Thursday and alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark Huff can be reached on 571-272-1385. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Martin J Angebranndt
Primary Examiner
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05/10/2005